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DOCKET NO.: 2343-172-27

ASSISTANT COMMISSIONER FOR PATENTS  
PO BOX 1450  
ALEXANDRIA, VA 22313-1450

Re: Serial No.: 10/662,347  
Applicant(s): Akshaya KUMAR, et al.  
Filing Date: September 16, 2003  
For: FIBER OPTIC LASER-INDUCED BREAKDOWN SPECTROSCOPY  
DEVICE AND METHODS OF USE  
Group Art Unit: 1877  
Examiner:

SIR:

Attached hereto for filing are the following papers:

Information Disclosure Statement  
PTO-1449  
Cited References (23)

Our check in the amount of \$ 0.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary extension of time to make the filing of the attached documents timely, please charge or credit the difference to Deposit Account No. 50-1442. Further, if these papers are not considered timely filed, then a request is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

PIPER RUDNICK LLP

Steven B. Kelber  
Attorney of Record  
Registration No.: 30,073

Patrick R. Delaney  
Registration No.: 45,338

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION: Akshaya KUMAR, et al.

GROUP ART UNIT: 2877

SERIAL NUMBER: 10/662,347

EXAMINER:

FILED: September 16, 2003

FOR: FIBER OPTIC LASER-INDUCED BREAKDOWN SPECTROSCOPY DEVICE AND METHODS OF USE

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.97

Assistant Commissioner for Patents  
PO BOX 1450  
ALEXANDRIA, VA 22313-1450

Sir:

Applicant(s) wish(es) to disclose the following information.

REFERENCES

- ☒ Applicant(s) wish(es) to make of record the documents listed on the attached Form PTO-1449. Copies of the listed documents are attached, where required, as are either statements of relevancy or any readily available full or partial English translations of any non-English-language documents.

RELATED CASES

- ☐ Attached is a list of Applicant's(s') pending applications and issued patents which may be related to the present application. Copies of the documents, where required, are attached along with Form PTO-1449.

CERTIFICATION

The undersigned certifies that

- ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application for the first time (to the knowledge of the undersigned, having made reasonable inquiry) not more than three months prior to the filing of this statement.
- ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.

BASIS FOR CONSIDERATION

This Information Disclosure Statement is filed:

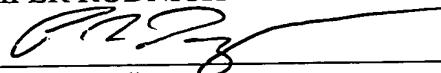
- ☐ without fee and within three months of the filing date of the application.
- ☐ without fee and within three months of the date of entry of the U.S. national stage.
- ☒ without fee and before the mailing date of a first Office Action on the merits (to the knowledge of the undersigned).
- ☐ without fee and with the appropriate certification above.
- ☐ without fee and with a new CPA application.
- ☐ without fee and with a Request for Continued Examination.
- ☐ with fee and before the mailing date of any of a Final Office Action, Notice of Allowance or an action that otherwise closes prosecution (to the knowledge of the undersigned).
- ☐ with fee, appropriate certification above, and before payment of the Issue Fee.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to Deposit Account No. 50-1442.

Respectfully submitted,

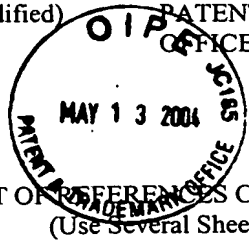
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Form PTO 1449 U.S. DEPARTMENT OF  
COMMERCE  
(Modified) PATENT AND TRADEMARK  
OFFICE



LIST OF REFERENCES CITED BY APPLICANT  
(Use Several Sheets if Necessary)

DOCKET NO.

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SERIAL NO.

10/662,347

APPLICANT

Akshaya KUMAR, et al.

FILING DATE

September 16, 2003

GROUP ART UNIT

2877

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO
	AK				

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

AP	Palmer-Toy, D.E., et al., "Direct Acquisition of Matrix-assisted Laser Desorption/Ionization Time-of-Flight Mass Spectra from Laser Capture Microdissected Tissues", Clinical Chemistry, Vol. 46, No. 9, pp. 1513-1516, 2000.
AQ	Chaurand, P., et al., "Assesing Protein Patterns in Disease Using Imaging Mass Spectrometry", Journal of Proteome, Vol. 6, pp. 676-681, 2003.
AR	Jemal, A., et al., "Cancer Statistics, 2003", CA Cancer J. Clin., Vol. 53, pp. 5-26, 2003.
AS	"Cancer Facts and Figures 2003", American Cancer Society, <a href="http://www.cancer.org">www.cancer.org</a> , 2003.
AT	Srinivas, P.R., et al., "Proteomics in Early Detection of Cancer", Clinical Chemistry, Vol. 47, No. 10, pp. 1901-1911, 2001.
AU	Ramanujam, N., et al., "Fast and Noninvasive Fluorescence Imaging of Biological Tissues In Vivo Using a Flying-Spot Scanner", IEEE Trans. On Biomed. Engg., Vol. 48, No. 9, pp. 1034-1041, 2001.
AV	Ntziachristos, V., et al., "Fluorescence imaging with near-infrared light: new technological advances that enable in vivo molecular imaging", Eur. Radio., Vol. 13, pp. 195-208, 2003.
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AX	Schafer, K.A., et al., "A Canine Model of Familial Mammary Gland Neoplasia", Vet Pathol, Vol. 35, pp. 168-177, 1998.
AY	Vail, D.M., et al., "Spontaneously Occurring Tumors of Companion Animals as Models for Human Cancer", Cancer Investigation, Vol. 18, No. 8, pp. 781-792, 2000.
AZ	E. Gregory MacEwen, "Spontaneous tumors in dogs and cats: Models for the study of cancer biology and treatment", Cancer Metastasis Rev., Vol. 9, pp. 125-126, 1990.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		DOCKET NO.  2343-172-27		SERIAL NO.  10/662,347	
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)				APPLICANT  Akshaya KUMAR, et al.			
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U.S. PATENT DOCUMENTS							
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FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY		TRANSLATION YES NO	
	AK						
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
	BA	Yueh, F.Y., et al., "Laser-induced Breakdown Spectroscopy, Elemental Analysis", Encyclopedia of Analytical Chemistry, John Wiley and Sons, Ltd., Chisheter, U.K., pp. 2066-287, 2000.					
	BB	Radziemski, L.J., et al., "Spectrochemical Analysis Using Laser Plasma Excitation", Laser-Induced Plasmas and Applications, Marcel Dekker, New York, NY, Chapter 7, pp. 295-325, 1989.					
	BC	Thiem, T.L., et al., "Quantitative Simultaneous Elemental Determinations in Alloys Using Laser-Induced Breakdown Spectroscopy (LIBS) in an Ultra-High Vacuum", Applied Spectroscopy, Vol. 48, No. 1, pp. 58-64, 1994.					
	BD	Rusak, D.A., et al., "Fundamentals and Applications of Laser-Induced Breakdown Spectroscopy", Crit. Reviews in Anal. Chem., Vol. 27, No 4, pp. 257-290, 1997.					
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	BF	Samek, O., et al., "Application of laser-induced breakdown spectroscopy to in situ analysis of liquid samples", Opt. Eng., Vol. 38, No. 8, pp. 2248-2262, 2000.					
	BG	Kwiatek, W.M., et al., "Investigation of trace elements in cancer kidney tissues by SRIXE and PIXE", Nuclear Instruments and Methods in Physics Research B 109/110, pp. 284-288, 1996.					
	BH	Ershaidat, N.M., et al., "Elemental Analysis of Colorectal Cancerous Samples using XRF Techniques", See <a href="mailto:enidal@yu.edu.jo">enidal@yu.edu.jo</a> , <a href="mailto:mahmoods@yu.edu.jo">mahmoods@yu.edu.jo</a> , 2002.					
	BI	Kumar, A., et al., "Characterization of Malignant Tissue Cells Using Laser-induced Breakdown Spectroscopy", Optics Express (under review), 2003.					
	BJ	Kumar, A., et al, "Laser Induced Breakdown Spectroscopy: Application to Life Sciences", Mississippi State University, Invention Disclosure No. 03-0414-50, 2003.					
	BK	Ng, C.W., et al., "Detection of Sodium and Potassium in Single Human Red Blood Cells by 193-nm Laser Ablative Sampling: A Feasibility Demonstration", Analytical Chemistry, Vol. 72, No. 1, pp. 247-250, 2000.					
	BL	Xu, B.J., et al., "Direct Analysis of Laser Capture Microdissected Cells by MALDI Mass Spectrometry", American Society for Mass Spectrometry, Vol. 13, 1292-1297, 2002.					
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